

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Name Application of: Francisco J. Ayala

Serial No.: 10/755,946

Filing Date: June 2, 2004

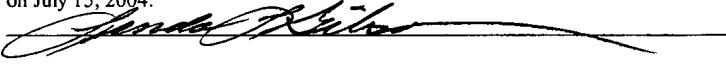
Examiner: NOT YET KNOWN

Group No.: NOT YET ASSIGNED

For: SYSTEM AND METHOD FOR DEVELOPING ARTIFICIAL  
INTELLIGENCE

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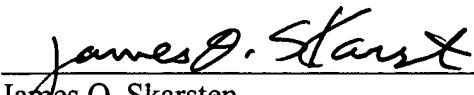
Pursuant to the provisions of 37 C.F.R. § 1.97, Applicant(s) hereby make(s) of record the references set forth in the attached form(s) PTO/SB/08A and PTO/SB/08B. References listed on PTO/SB/08B are attached for your review; however, references are listed in no specific order nor based on their pertinence. No inference should be made that the cited references are in fact material, are in fact prior art, or that no better art exists.

The filing of this Information Disclosure Statement (IDS) shall not be construed as a representation that a search has been made, an admission that the information cited is, or is not considered to be, material to patentability, or that no other material information exists. Further, the filing of this Information Disclosure Statement shall not be construed as an admission against interest in any manner. Written notification that the enclosed references have been considered in

their entirety by return of a copy of the enclosed form, completed by the Examiner, is respectfully requested. It is also requested that the cited references be cited on the front of any patent issuing from this application. An early action on the merits is respectfully requested.

Applicant believes no fees are due for the filing of this IDS. However, if any fees are due, other than an issue fee or any overpayments have been made, please charge, or credit our Deposit Account No. 07-0153.

Respectfully submitted,  
GARDERE WYNNE SEWELL LLP

  
\_\_\_\_\_  
James O. Skarsten  
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ATTORNEYS FOR APPLICANT

Dated: July 15, 2004

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PTO/SB/08A (08-00)

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Sheet 1 of 6

**Complete if Known**

Application Number	10/755,946
Filing Date	January 13, 2004
First Named Inventor	Francisco J. Ayala
Group Art Unit	608
Examiner Name	NOT YET KNOWN
Attorney Docket Number	128180-1000

## U.S. PATENT DOCUMENTS

## FOREIGN PATENT DOCUMENTS

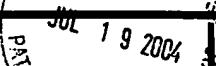
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(use as many sheets as necessary)			
Sheet	2	of	6
			
<b>Application Number</b> 10/755,946 <b>Filing Date</b> January 13, 2004 <b>First Named Inventor</b> Francisco J. Ayala <b>Group Art Unit</b> 608 <b>Examiner Name</b> NOT YET KNOWN <b>Attorney Docket Number</b> 128180-1000			

## U.S. PATENT DOCUMENTS

Examiner Initials <sup>1</sup>	Cite No. <sup>2</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>3</sup> (if known)			
		5,568,590	B1	Tolson	10-22-1996	
		5,617,483	B1	Osawa	04-01-1997	
		5,633,988	B1	Takatori et al.	05-27-1997	
		5,640,494	B1	Jabri, et al.	06-17-1997	
		5,704,016	B1	Shigematsu et al.	12-30-1997	
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		5,720,002	B1	Wang	02-17-1998	
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		5,761,381	B1	Arci et al.	06-02-1998	
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		5,832,466	B1	Feldgajer	11-03-1998	
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		5,870,729	B1	Yoda	02-09-1999	
		5,920,851	B1	Muller	07-06-1999	
		5,930,781	B1	Toomarian et al.	07-27-1999	
		5,937,432	B1	Yamaguchi et al.	08-10-1999	

## **FOREIGN PATENT DOCUMENTS**

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		Application Number	10/755,946
(use as many sheets as necessary)		Filing Date	January 13, 2004
		First Named Inventor	Francisco J. Ayala
		Group Art Unit	608
		Examiner Name	NOT YET KNOWN
		Attorney Docket Number	128180-1000
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		Number	Kind Code <sup>2</sup> (if known)			
		5,974,404	B1	Moed et al.	10-26-1999	
		6,038,338	B1	Nguyen	03-14-2000	
		6,151,592	B1	Inazumi	11-21-2000	
		6,205,556 B1	B1	Watanabe et al.	03-20-2001	
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		6,349,293 B1	B1	Yamaguchi	02-19-2002	
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		6,449,603 B1	B1	Hunter	09-10-2002	
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		Pub. No. 0014378	A1	Goodnight et al.	01-16-2003	
		Pub. No. 0018598	A1	Cawse et a.	01-23-2003	
		Pub. No. 0059154	A1	Rodvold	05-16-2002	
		Pub. No. 0004904	A1	Kirshenbaum	01-02-2003	
			B1			

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of

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Filing Date	January 13, 2004
First Named Inventor	Francisco J. Ayala
Group Art Unit	608
Examiner Name	NOT YET KNOWN

Attorney Docket Number 128180-1000

**OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS**

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		HALLINAN, J., et al., 1998; <u>Cooperative Evolution Of A Neural Classifier And Feature Subset</u> ; Proc. 2nd Asia-Pacific Conference on Simulated Evolution and Learning	
		HARTER, D. et al., 2001; <u>Models of Ontogenetic Development for Autonomous Adaptive Systems</u> ; Proceedings of the 23rd Annual Conference of the Cognitive Science Society, pp. 405-410	
		HOCHMAN, R., et al., 1996; <u>Using The Genetic Algorithm To Build Optimal Neural Networks For Fault-Prone Module Detection</u> ; In Proc. the Seventh Int. Symposium on Software Reliability Engineering, pp. 152-162; White Plains, N.Y.	
		KEANE, M.A., et al., 2002; <u>Automatic Synthesis Using Genetic Programming of an Improved General-Purpose Controller for Industrially Representative Plants</u> ; <i>Evolvable Hardware</i> , 2002; pp. 113-122.	
		MICHEL, O., 1995; <u>An Artificial Life Approach for the Synthesis of Autonomous Agents</u> ; In J. Alliot, E. Lutton, E. Ronald, M. Schoenauer, and D. Snyers (Eds.), Proceedings of the European Conference on Artificial Evolution. Springer-Verlag.	
		KAELBLING, L.P., et al. <u>Reinforcement Learning: A Survey</u> , (1996), <i>Journal of Artificial Intelligence Research</i> 4: 237-285.	
		TOURETZKY, D.S., et al., (1997) <u>Operant Conditioning in Skinnerbots</u> ." <i>Adaptive Behavior</i> 5:219-247.	
		BYOUNT-TAK ZHANG, et al., <u>Evolutionary Induction of Sparse Neural Trees</u> , <i>Evolutionary Computation</i> , 1997, Vol. 5, No. 2, pp. 213-236	

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		BYOUNG-TAK ZHANG, et al., <u>Evolutionary Neural Trees for Modeling and Predicting Complex Systems</u> ; <i>Engng. Applic. Artif. Intell.</i> Vol 10, No. 5 pp. 473-483, 1997
		KOZA, JOHN R., 1989, <u>Hierarchical Genetic Algorithms Operating on Populations of Computer Programs</u> , Reprinted: Computer Science Department, Stanford University, Stanford, CA; pp. 578-584
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		J.R.KOZA, et al.; <u>Evolving Inventions</u> ; <i>Scientific American</i> ; 2003; pp. 52-59
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		R.E.Lenski, et al.; <u>The Evolutionary Origin of Complex Features</u> ; <i>Nature</i> , Vol. 423, 8 May 2003; pp. 139-144
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		P.D. WASSERMAN, et al.; <u>Neural Networks, What are they and Why is Everybody so Interested in Them Now?</u> ; Part 2; Institute of Electrical and Electronics Engineering <i>Expert</i> , Spring 1988; pp. 10-15
		R.S.SCALERO, et al.; <u>A Fast New Algorighm for Training Feedforward Neural Networks</u> ; Institute of Electrical and Electronics Engineering; <i>Transactions on Signal Processing</i> . Vol. 40, No. 1, January 1992; pp. 202-210

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		K.E. KINNEAR, JR.; <u>Evolutionary Computers 1, Basic Algorithms and Operators, Beck, T. et al. (eds) 2000; Institute of Physics Publishing, Bristol; pp. 102-113</u>	
		P.J. ANGELINE; <u>Evolutionary Computers 1, Basic Algorithms and Operators, Beck, T. et al. (eds) 2000; Institute of Physics Publishing, Bristol; pp. 102-113</u>	
		D.TVETER; <u>The Pattern Recognition Basis of Artificial Intelligence</u>	
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		S.S.HAN, et al.; <u>Optimization of Neural Network Structure and Learning Parameters Using Genetic Algorithms; 8<sup>th</sup> International Conference on Tools with Artificial Intelligence; November 16-19, 1996; Toulouse, France; p. 200\</u>	
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		A.K. BANSAL; <u>Establishing a Framework for Comparative Analysis of Genome Sequences; IEEE First International Symposium on Intelligence in Neural and Biological Systems May 29-31 1995; p. 84</u>	
		M.HILARIO, et al.; <u>A Metalevel Architecture for Knowledge-Based neural Network Design; IEEE 9<sup>th</sup> International Conference on Tools with Artificial Intelligence; November 2-8, 1997</u>	

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